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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,126	03/01/2002	Manuel Chesneau	CHESNEAU=1	5654

1444 7590 07/24/2003

BROWDY AND NEIMARK, P.L.L.C.  
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WASHINGTON, DC 20001-5303

EXAMINER

LISH, PETER J

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 07/24/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/085,126

Applicant(s)

CHESNEAU ET AL.

Examiner

Peter J Lish

Art Unit

1754

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 and 24-26 is/are pending in the application.
- 4a) Of the above claim(s) 10-20 and 24-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-20 and 24-26 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## DETAILED ACTION

### *Election/Restrictions*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-9, drawn to an activated carbon material, classified in class 423, subclass 445.
- II. Claims 10-20, drawn to a method of treating an activated carbon material, classified in class 423, subclass 460.
- III. Claims 24-26, drawn to a method of using an activated carbon, classified in class 210, subclass 694.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product may be made by another and materially different process, such as the chemical activation of carbon materials.

Inventions I and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product can be used in a materially different process of using that product, such as the storage of gases.

Inventions II and III are related as process of making and process of using the product. Restriction is proper for a combination of the reasons given above, the product may be made by another materially different process and the product may be used in another materially different process.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Sheridan Neimark on July 17<sup>th</sup>, 2003, a provisional election was made with traverse to prosecute the invention of Group I, claims 1-9. Affirmation of this election must be made by applicant in replying to this Office action. Claims 10-20 and 24-26 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarjeant (US 4,148,753) in view of applicant's admission.

Sarjeant teaches a process for the neutralization of carbon, which has been activated by a phosphoric acid process, by contacting the carbon with an aqueous suspension of an additive

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material comprising a metal oxide or hydroxide, specifically alkaline earth metal hydroxides. In doing so, the metal hydroxides react with the residual phosphoric acid found in the carbon pores and bind the reaction product in situ to the carbon as a substantially water insoluble salt.

Following additive contacting, the carbon is subjected to temperatures ranging from 2000 °F to 400 °F (1093-204 °C) in a steaming atmosphere.

Applicants admit that "Picabiol" is an activated carbon manufactured industrially and activated by a phosphoric acid process. It therefore would have been obvious to one of ordinary skill at the time of invention to perform the treatment of Sarjeant on the activated carbon known as "Picabiol" in order to neutralize the residual acid that remains on the activated carbon as a result of the activation process.

It is expected that the activated carbon product resulting from the treatment of Sarjeant on the activated carbon known as "Picabiol" has properties equivalent to that claimed, because no difference is seen between the process taught by Sarjeant and the process of the instantly claimed invention.

Regarding the control of the particle size of the activated carbon. It is well known in the art to control the size of activated carbon particles through sieving and milling. The selection of a specific particle size is seen to be the optimization of a known process, which could have been determined through routine experimentation, and is held to be obvious by *In re Boesch*, 205 USPQ 215.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Putyera et al. (US 6,225,257) taken with Unger et al. (US 4,225,463) and in view of applicant's admission.

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Putyera teaches a process for the modification of activated carbon. The process comprises heat treatment in which a selected, commercially available, activated carbon is contacted with carbon-dioxide gas, optionally containing diluting gases such as water vapor, at a temperature of about 850 °C. Doing so alters the microporous structure of the activated carbon, making the carbons more useful for the storage of gaseous fuels.

Unger teaches a process for the modification of activated carbon. The process comprises a solvent treatment wherein the organic and mineral impurities contained in the activated carbon are removed. Suitable solvents include basic solutions, for example sodium hydroxide solution, potassium hydroxide, or ammonia. Additionally, Unger teaches that the materials can be ground to small particle sizes without difficulty and batches with any desired particle size can be obtained by particle size fractionation. It would have been obvious to one of ordinary skill at the time of invention to obtain activated carbon of any desired size, for example between 0.15 and 4.75 mm or less than 212 microns, as doing so is the optimization of a known process, which could have been determined through routine experimentation, and is held to be obvious by In re Boesch, 205 USPQ 215.

Applicants admit that "Picabiol" is an activated carbon manufactured industrially, which contains  $P_2O_5$  impurities. It therefore would have been obvious to one of ordinary skill at the time of invention to perform the treatments of Unger and Putyera on the activated carbon known as "Picabiol" in order to achieve the improvements of removing known impurities and creating an enhanced microporous structure.

It is expected that the activated carbon product resulting from the combined treatment has properties equivalent to that claimed, because no difference is seen between the process taught by the combination of Unger and Putyera and the process of the instantly claimed invention.

Claims 1-6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hager et al. (US 4,416,798) in view of JP 51089888A and van Duijn (US 5,198,398) and further in view of applicant's admission.

Hager et al. teach a process for the regeneration of activated carbon, which is used in the treatment of wastewater. The regeneration process comprises steam and/or caustic treatments. Hager teaches that steam regeneration desorbs the compounds from the carbon, but does not explicitly teach the temperature at which steam regeneration is undertaken. Van Duijn teaches that steam regeneration occurs at a temperature between 800 and 1000 °C (column 11, lines 58-60). It therefore would have been obvious to one of ordinary skill at the time of invention to perform the steam regeneration within the temperature range taught by van Duijn.

Additionally Hager does not explicitly teach the details of the caustic treatment. JP 51089888A teaches that activated carbon may be washed with ammonia in order to dissolve, or desorb, organic substances adsorbed by the carbon, without changing the physical and chemical properties of the carbon. The process is useful for the regeneration of activated carbon.

It would have been obvious to one of ordinary skill to perform both the ammonia regeneration and the steam regeneration in the process of Hager et al. in order to provide a high quality regeneration of the activated carbon adsorbent. Applicants admit that "Picabiol" is an activated carbon that is used for the treatment of wastewater. It therefore would have been obvious to one of ordinary skill at the time of invention to apply the regeneration procedure, as taught above, on the activated carbon known as "Picabiol" in order to provide a high quality regeneration of the activated carbon.



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It is expected that the activated carbon product resulting from the combined treatment has properties equivalent to that claimed, because no difference is seen between the process taught by the combined teaching of Hager, van Duijn, and JP 51089888A and the process of the instantly claimed invention.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Lish whose telephone number is 703-308-1772. The examiner can normally be reached on 9:00-6:00 Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 703-308-3837. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-305-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

PL  
July 22, 2003



STUART L. HENDRICKSON  
PRIMARY EXAMINER